NPIC/P&DS/D/[redacted] 25X1A
21 July 1966

MEMORANDUM FOR: Chief, Procurement Division, Office of Logistics

25X1A ATTENTION: [redacted]

THROUGH: Chief, Support Staff, NPIC

SUBJECT: [redacted] 25X1A

REFERENCES:
(a) [redacted] Letter Dated 23 July 1965
(b) Letter Dated 18 August 1965
(c) Letter Dated 17 January 1966
Document # [redacted] 25X1A
(d) [redacted] Proposal [redacted] ated March 1963
(e) Proposal [redacted] Dated July 1963
25X1A (f) Report Dated 3 December 1964 25X1A

1. Reference (a), amended by References (b) and (c), requested additional funding for the subject contracts. The basis for this request is the contention that there where four (4) specific changes in scope to the original contract. This memorandum attempts to tabulate the pertinent facts relating to each of these claims.

2. It has been determined that the Design Objectives, dated 5 February 1963, written for the Point Transfer Device were not incorporated in the contract. For this reason an analysis has been performed reviewing these claims in comparison with the Contractor's proposal, which was included in the contract.

3. An analysis is also made of References (d) and (e) with regard to items that were originally proposed but not delivered with the equipment. Items that were proposed with regard to each of the four specific claims, but omitted from the delivered equipment, are discussed in the sections pertaining to the specific related claims.

25X1A 4. Since the [redacted] Point Transfer Device and the [redacted] Fiber 25X1A
Optic Viewers are basically the same instruments - with the exception of the laser marking system and digital readout on the [redacted] -and 25X1A
since all the problems encountered were common to both equipments, they are considered as being the same equipment for purposes of this analysis.

5. Vacuum Film Hold-down. Reference (c) claims that the contractor proposed to utilize a vacuum groove system manufactured by [redacted] They claim that this system was later objected to by the contract monitor and that a substantial effort was expended to overcome these objections. 25X1A

Reference (d) and (e) both specifically state that the groove system produced by [redacted] was to be used; however, there is no mention in those references of the visibility of the grooves or the length of time required to flatten the film. The Contractor's Progress Report for July and August 1963 states "vacuum film hold-down techniques with edge guides, similar to those seen on the [redacted] AR-264 Viewers, will be used. Some improvements are needed, however, to minimize handling of film during film pull-down and bring operator assurance of positive film pull-down, regardless of film width or length." In this report, under "Work To Be Accomplished," it is stated that "vacuum hold-down devices will be investigated. Existing equipment using this technique will be studied." This indicates that they realized deficiencies in the proposed system and intended to improve this component from the beginning. 25X1A 25X1A

The Contractor's December 1963 Progress Report mentions that "the design will accept only 70mm, 5" and 9½" films." In the Contractor's February 1964 Progress Report [the OD-174 referred to in Reference (c)] the contractor stated that "special effort has been devoted to obtain plattens with highly polished grid lines to minimize the effect of grid lines hiding bits of photo data. Laboratory samples have been excellent. Certain patterns will be delivered by late March and will be checked for functional hold-down performance as well as for line quality before final manufacturing is approved." In the technical monitor's Telephone Conversation Record dated 26 February 1964, it is stated that the contractor had obtained samples of a microgroove plate from [redacted] which has "a polished groove which is believed superior to the [redacted] grooves for minimizing visibility." Samples were sent to NPIC for evaluation. 25X1A 25X1A

The Contractor's March 1964 Progress Report [OD-184 referred to in Reference (c)] indicated that the pull-down time varied between 10-40 seconds and "efforts are being devoted towards reducing this time and minimizing microgroove visibility." The technical monitor's Memorandum For The Record dated 16 March 1964 reported that [redacted] glass with microgrooves having polished edges shows definite promise for practically invisible grooves." 25X1A 25X1A

The Contractor's April 1964 Progress Report [OD-189, Reference (c)] stated that "Vendor [redacted] supplying platen is now refining his manufacturing methods so that desired groove depth and low visibility are maintained. The method of measurement of microgroove depth seems to have been a problem because we repeatedly 25X1A

observed shallower grooves then did vendor. Efforts are still being continued to get ten (10) second pull-down time for all film widths used." The technical monitor's Memorandum For The Record, dated 5 May 1964, indicated "the contractor is still working on the problem of producing an optimum vacuum groove...when the groove is deepened the hold-down occurs within the 10 second limit [this specification came from the Design Objectives for the [redacted] but the grooves are not acceptable optically. If we have to compromise, we will give up time [hold-down speed] to obtain optical quality." 25X1A

The Contractor's Progress Report for June 1964 (OD-199) gives the first real indication of the unacceptability of the groove plate; "Vendor [redacted] has not obtained least visibility desired by customer, and apparently there is little promise of improvement.... It is our goal to render grooves nearly invisible yet maintain a reasonable pull-down time if ten second requirement cannot be met."* The monitor's Memorandum For The Record dated 18 June 1964 stated that "the microgroove plates have not been perfected...these plates do not have the required degree of polish and are not acceptable optically."* 25X1A

The June and July 1964 Monitor's Contract Inspection Report noted that the vacuum hold-down system was becoming an acute problem. The July and August 1964 Contractor's Progress Reports indicated that no progress had been made in improving the system. The July report [OD-205, Reference (c)] stated "Microgrooves have received attention in experimenting with other polishing techniques than that used by the vendor [redacted] From 20X and higher magnifications their is much improvement, although microgrooves are not truly invisible at lower magnification. Customer will be shown these at August meeting. To realize these improved microgrooves a rather lengthly manufacturing process is required, and will significantly raise parts cost* and may greatly increase pull-down time. Therefore, we are proceeding to obtain one (1) set of platens without micro-grooves for experimentation with flat hold-down surfaces. With the improved seals in the manifolds, a lower pressure difference across film may help reduce chance of isolated air pockets under film upon pull-down. Conclusions should be seen in late August."[sic.] 25X1A

The Contractor's Progress Report for September 1964 [OD-215 Reference (c)] stated that "platens have been re-designed to overcome [the] problem of microgroove visibility by replacing them by three (3) transverse large grooves, about 1mm wide, equally spaced across the film viewing area. Air pockets under film are evacuated quickly, sometimes requiring alternating "release" and "hold" modes once or twice to secure complete hold-down on 9 inch film. If information area falls on top of the large grooves, film will have to be moved a small amount." In the Contractor's Review of Meeting, dated 12 October 1964, it was stated that the "customer [was] shown [the] new platen design with three (3) transverse grooves."

The Contract Inspection Reports for September and October 1964 indicated that the vacuum problem still existed.

The Contractor's Progress Report for November 1964 [OD-228 Reference (c)] stated "Because vacuum platens with three (3) microgrooves are not acceptable, we have been attempting to find a solution for use of plain glass surfaces in viewing area. By improving edge guiding of film and alternating the use of air pressure, some improvement is seen although pull-down time is extended considerably to at least 30 seconds when subborn air pockets on 9½ inch film are encountered. The new experiments have shown the manifold seals are not too satisfactory under small pressure differences required for better control of air pockets. Further work is required to get plain [non-grooved] plates and seals to work satisfactorily."

The Progress Report for January 1965 reports that "much work has been expended in this area to discover a method to reduce or eliminate air bubbles under film when using 9½" wide film...generally about 90% or better of the scanned area is pulled down within a few seconds and complete pull-down can get to a minute or more.... To get any reduction in pull-down time with 9½" film, some configuration with microgrooves will have to be considered together with some effect on image. To minimize image degradation, increased diffusion of input light will be required.... [The] microgroove cross section and means to mask or minimize optical effects of cross section could have serious side effects on existing parts of the viewer. We will approach several suppliers for availability of improved macrogroove cross sections and patterns."

The February 1965 Progress Report indicated that the contractor was returning to the three groove approach; "glass platens, with three highly polished microgrooves each, are being made as an attempt to get a solution for the pull-down problem. It is hoped that the groove visibility will be greatly reduced and, at the same time, give enough exhaust path for the air bubbles under film.... Experimental work is underway to examine interruption of vacuum to minimize bubble information.... The combination of low vacuum cycling and diffusion technique may reduce hold-down time but no conclusion has been reached." This effort was continued in March 1965 and, in that same period, work was initiated on a more visible [wider groove] microgroove plate.

In the May 1965 Progress Report, [redacted] concluded that "there appears to be no answer in sight for this problem of groove visibility without some degradation of imagery." Nevertheless, the June 1965 Report indicated that the contractor was continuing to "study and search for various optical and manufacturing techniques that may minimize groove visibility of vacuum film hold-down platen," which was continued in August 1965. 25X1A

The Customer Review Report dated 9 November 1965 indicated that nothing further was being done to implement removal of the macrogrooves because of the financial limitations /this is first written indication of financial problems/ of the project. No further mention of the vacuum hold-down problem is made in subsequent Reports. The first [redacted] was accepted on 1 November 1965 with the compromise three (3) macrogroove system installed.* 25X1A

From an analysis of the available documentation (partially described above), the following can be stated:

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A. Both the proposals for the [redacted] 25X1A
[redacted] did state that a vacuum groove system sub-contracted 25X1A
to [redacted] would be used.

[redacted] 25X1A
of obtaining equivalent microgrooves plates.

C. No claim by the contractor [redacted] as to the visibility or invisibility of the grooves was made in either the proposals 25X1A
25X1A for the [redacted] nor, was there any claim made that they would meet any specific time for hold-down.

D. The Contractor's progress reports referred to in Reference (c) did (as stated) record and describe the contractors difficulties in developing an acceptable vacuum hold-down system. They did not, however, claim that; there was a change-of-scope, or that they felt our requirement anything above what was contracted for, or that they would have to stop work unless they obtained additional funding. The Customer Review Report dated 9 November 1965 was the first documented statement that the vacuum hold-down system had come up against financial limitations. At this point their (compromise) three (3) groove macrogroove system was accepted 25X1A
for the [redacted] - it was still hoped that an improved system could be found and retrofitted on the [redacted] 25X1A

Reviewing these statements indicates that what the contractor states is essentially, though only partially, true. He was under some pressure to meet specifications not promised in the proposal. /Responsive to the design objective/

The only item with regard to the vacuum hold-down system that was proposed and not delivered was the automatic vacuum release. The change to non-automatic operation was consented to by the technical monitor because the recommendation of 4 March 1964 indicated that the control console would contain the vacuum control switches. This was a concession on our part in attempt to alleviate some of their overwhelming technological problems with the vacuum system.

6. Objective-Head Drive. The contractor claims in references
25X1A (a) and (c) that [redacted] clearly indicated that a two speed gear box would be utilized for the objective-head drive system. They claim that the stepping speeds of the drive system were clearly indicated to be within the frequency response range of the human eye; however, no objection was raised until the viewer was fabricated.

25X1A In both proposals, [redacted] proposed "an infinitely variable two range electric motor powered drive." In the [redacted] (page 17) 25X1A the contractor states that the following drive speeds will be incorporated into the instrument; "...high range - .02"/sec. to 1"/sec.; low range -.005"/sec. to .025"/sec. In addition to the above, a slow mode is provided with fixed speeds of approximately 3 microns/second [.0001"/sec.]. In this mode a repetitious pulse is provided allowing the drive to advance in steps allowing close positioning to better than one micron." It is claimed that the above clearly indicates that the minimum traverse distance per second was specified as $2\frac{1}{2}$ times the specified step distance; therefore, it was clearly evident that stepping speeds as low as $2\frac{1}{2}$ steps per second would be provided, which is within the known frequency response range of the human eye.

25X1A The speeds proposed for the [redacted] Viewers (page 21 & 22) were slightly different; .0001"/sec. to .030"/sec., a .010"/sec. to 1.0"/sec. and an additional step motion of 1 micron per step. Further, the proposal states "the operator merely rotates the handwheel clockwise or counterclockwise to achieve the selection
25X1A of one of 3 speed ranges" [redacted] - page 22). The slowest speed was to be approximately 3 microns per second; therefore, using the same logic, the same claim regarding the response of the eye would apply. The proposal further states that "an alternative to the jog switch is a rotatable switch located at the handle of the joy stock to allow selection offast, medium or very slow speeds." This was not provided; it was eliminated to reduce the joy stick complexity.

The earliest reference to the problem associated with the objective-head drive was in the Contractor's Progress Report July and August 1963 under Scan Drive Assembly "Drive motors will be of
25X1A stepping type. [redacted] Slo-Syn Model SS 250-1027 appears to be the likely candidate. Further tests are needed before final selection can be made. In general, the problem being studied concerns the fact that torque output declines as stepping frequency increases with motors under consideration. To keep lowest frequency at a rate where motion will appear continuous and to have 100X speed range of motor speed will require a high stepping rate that is accompanied by significantly reduced torque. Therefore as a compromise will have a maximum around 300 steps per second and have the required torque output." [sic.] "The design objective [theirs,

not ours/ of this equipment discussed above is to provide a highly stable and sensitive drive mechanism for positioning the optics over the film being studied in this viewer."*

A Trip Report dated 12 September 1963 prepared by [redacted] 25X1A of NAVPIC, now of NPIC, states that "even with the design approach now planned a slight 'pulsing' motion will be noticable when viewing at highest magnification."

The monthly progress report for July and August 1964 makes reference to only two gear ratios. The proposed speeds were reiterated in the technical monitor's trip report dated 5 May 1964.

The monthly progress report for July 1964 indicates a two speed gear box was still being used, but the contractor was incorporating a screw drive that has two motor speed ranges, as well as the two speed gear box. /This was to solve some of their own technical problems; there was no advantage to us./

The contractor states in reference (c) "the first hint of the customer's objections to the two-speed gear box was alluded to in the August 1964 Progress Report, OD-209, dated 15 September 1964 concerning the resolution possible with the existing frequency of movement." This is not a valid statement based on reading OD-209.

In reference (c), the contractor states that as the result of a 23 November 1964 meeting "an internal [redacted] document 25X1A was prepared on 24 November" and later attached to the November 1964 Progress Report as File # CD-114 the contractor states," this document pointed out that going to a three-speed gear box was beyond the scope of the contract. This is not so. CD-114 says only, under the title "Parts Unacceptable to Customer, but not Supplied by 25X1A [redacted] the words Unacceptable Drive System listed as an item.

The contractor's report titled, "Report on Stepping Drive on 25X1A [redacted] System" dated 3 December 1964, gives a very detailed analysis of the stepping drive system. A rationale is outlined giving the reasons for selection of this type of motor and why it is the only type that will satisfy the requirement. The report analyzes the effect of stepping motors on the visibility of non-continuous motion and concludes that the system utilizing two gears and two motor speed ranges is not adequate for all magnifications, particularly in themiddle ranges, if the visibility of the steps cannot be tolerated. Page 5 of this report under "Analysis of Present System" states "one may conclude from this graph that the operation may be quite adequate at the slow gear at the very high magnifications. It is also apparent that the system is adequate at the fast gear for the very low magnifications. At the middle magnifications there is a gap where it is not possible to scan without the eye observing the motion as a stepping action."*

The report further concludes that an alternate approach of adding a third gear ratio would solve the problem, [their solution, not ours] except in the decoupled mode when the differential magnification was extremely large. The 6 February 1965 Contract Inspection Report indicates that the contractor was in the process of incorporating the three speed gear box into the instrument. "The stepping motor system [the two gear system] has not given acceptable performance to date."

Extensive effort is indicated in the January through June 1965 Progress Reports to accomplish the change in the gear box. The modification was barely acceptable and the Contract Inspection Report of 21 June 1965 indicates that the "range of scanning speeds is adequate but stepping motors still leave a lot to be desired." There is no further mention of this problem in any of the later correspondence. The three gear system was accepted as being an adequate, though not optimum, solution to a very difficult technical problem.

From an analysis of the applicable documentation it can be stated that:

25X1A A. [redacted] originally proposed a two gear system.

B. The two gear system did not perform as [redacted] predicted it would. Here it should be stated that NPIC technical people had serious reservations as to the visual acceptability of stepping motor drives. As a consequence, the contractor was questioned in depth on this matter and we were given considerable verbal assurance that the pulses would be continuous except in the third mode (3 micron/sec.) where it was intended (and desirable) to see these descreet steps. 25X1A

C. By their own documentation they intended to "provide a highly stable and sensitive drive mechanism for positioning the optics over the film." The two-gear system was neither stable or sensitive.

D. By their own documentation, their two-gear system did not provide adequate performance in the middle ranges. "At the middle magnifications there is a gap where it is not possible to scan without the eye observing the motion as a stepping action." This is the range in which we were assured the motion would appear continuous.

E. The monitor did not ask the contractor to use the three gear system. The contractor offered it as a solution to the admittedly poor performance of their unacceptable original system. They were told this was not a change of scope. They made no attempt to clain at that time that it was anything but a rectification of an error on their part.

In general it appears there is little basis for the contractors claim as related to the Objective Head Drive.

25X1A 7. Low Magnification Lens With Large Field of View. The [redacted] 25X1A described the instrument as having a continuously variable (in three steps) magnification from 4.2X to 135X; however, this was modified by the contractor's letter dated 24 May 1963 which offered to include "one lens in each turret." Both the proposal and 25X1A the letter of 24 May 1963 were incorporated into [redacted] The additional cost for the extra lenses was [redacted] 25X1A

25X1A The [redacted] describes a four objective lens system: specifically "A. 1.5X to 6.4X with 0.36X objective, B. 4.2X to 18X with 1X objective lens, C. 10.5X to 45X with 2.5X objective lens, and D. 31.5X to 135X with 7.5X objective lens." In other words, the contractor proposed to furnish viewers with a magnification range of 1.5X to 135X. The ranges actually provided on the delivered instrument are A. 1.6X to 6.8X, B. 2.9X to 12X, C. 10.1X to 43X, and D. 30X to 128X. Although the total range of 1.6X to 128X is not as large as proposed, the actual overlap between the ranges is slightly greater than anticipated. The proposed zoom ratio of 0.7X to 3X was used; however, the fixed optic magnification was altered slightly.

25X1A In addition, the [redacted] specifies a film heating tolerance; "At maximum illumination intensity suitable for distinguishing .02 density gradient at a reference density of 2.0 the temperature of the film being viewed shall not be raised in excess of 30°F above ambient 80°F in fifteen minutes of continuous operation." Here one can see that there was a brightness and heat specification in the

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Furthermore, the [redacted] dated July 1963 clearly states 25X1A on page 6. "A field lens at the image plane formed by the objective lens assures full objective lens field coverage by the zoom magnifier and a uniform bright field making full use of the objective lens aperture," and on page 5 "In order to assure that the numerical aperture of the objectives are filled with light, the lower surface of glass plate is a diffusing ground glass surface."

In this section, the contractor's basic claim is that although he proposed to add a low power objective to the instrument, he did not contemplate the extensive engineering that was required to achieve an acceptable system. The objective lens proposed could not collect enough of the light, and eventually a large field lens had to be placed close to the film plane to enable the system to adequately collect the illumination.

As early as 26 October 1963, the technical monitor noted that there was no mention of illumination parameters. The specifications that were established were 500 to 600 ft.-lamberts at any magnification, or the illumination intensity must be coupled to the magnification.

The Progress Report for February 1964 indicates that the contractor was expending extensive effort to achieve the necessary design "Extensive laboratory tests and component evaluation was continued in order to optimize this light source" [the high intensity source]. Due to the wide field at lower power magnification, together with inherent light loss...a high wattage lamp would be required. In order to avoid high wattage lamp and resulting excessive temperature rises at the film plane, special efforts have been made to employ lower wattage lamps.... Laboratory mock-up test results have proven feasibility."

The Contract Inspection Report dated 4 March 1964 confirms the contractor's difficulties, in that [redacted] declared difficulty in achieving adequate illumination at low powers. In the contract monitor's Trip Report, dated 16 March 1964, it was stated that "the problem of adequate brightness at all magnifications was discussed again. [redacted] Vice-President for Engineering] was discouraged with the low magnification problem. He requested elimination of the low magnification objective.... The contract monitor states than 400 foot-lamberts is not adequate, but that all magnifications should have at least 1000 foot-lamberts."

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The March 1964 Progress Report indicated that a "detailed study is underway to seek a solution here." The Monitor's Trip Report dated 6 April 1964 stated that "the contractor is tentatively considering the use of a field lens between the film and the low power objective as a means of solving the low magnification illumination problem. They [contractor] were informed we did not consider this as an acceptable solution.... What they really want is for us to eliminate the low power requirement; for the present, this was refused."

The April 1964 Progress Report stated that the "low power illumination problem has been solved by placing a field lens between the film and objective lens."

At this point, reference (c) states "In a meeting held at [redacted] on 1 May 1964 attended by [redacted] it was pointed out to the customer that the high intensity light source and field lens solution to the low magnification problem were above and beyond the terms of the contract." This statement is not valid. We do not recall this verbal claim nor is it recorded in the monitor's trip report of the 1 May meeting or in the contractor's subsequent Progress Report covering that period.

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The Progress Report for May 1964 indicates that "additional lenses for low power magnification range have been designed, detailed and released." The 5 May 1964 monitor's Trip Report stated that "[redacted] claims that they can obtain an acceptable solution to the low power illumination through the use of a field lens between

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the film and the objective. We are still doubtful. [redacted] claims that they are currently obtaining 600 ft-lamberts on the lens bench mock-up." 25X1A

Doubt is again expressed as to the acceptability of the field lens for low magnification illumination in the monitor's Trip Report dated 9 July 1964. The July 1964 Contractor's Progress Report stated that the "low power field lens appears to work well optically and mechanically."

The Contractor's report of the Customer (monitor) Evaluation dated 16 November 1964 reported "distortion of [the] low power lens. Distortion cannot be reduced unless field lenses are removed. Because field lenses are not in image plane they add power and, therefore, distortion. Use of a lower power 4.5X eyelens reduced some of the distortion observed." The Trip Report dated 19 November 1964 confirmed this fact;" there is objectionable curvature of field with the low power objectives. At various settings the center of the field hasn't the same plane of focus as the edges."

The January 1965 Progress Report indicated that the image distortion had been considerably reduced; however, the effort "required making several special lenses and manufacture of new mounts."

Although it still had some undesirable optical characteristics, the field lens system was accepted at this point by the monitor as being the contractor's "best effort;" since, there did not appear to be another reasonable solution within the fixed price limits of the contract. It was a reasonable compromise between required performance and what was possible from an engineering standpoint.

From the available documentation it appears that:

25X1A A. [redacted] was paid extra to incorporate the low-power objectives - neglected to remember that they must make corresponding alterations in illumination - and vastly underbid this portion of the contract.

25X1A B. The [redacted] contract gave brightness and film heat requirements, while the [redacted] proposal did make references to 25X1A adequate high intensity illumination for all objectives. Nowhere did the contractor take exception to and/or state that; these requirements did not apply or were not valid for the low power objectives.

C. The Contractor's Progress Reports do document their problems in developing this system but he did not claim in writing, until after the fact, that this was an unreasonable requirement, a change-of-scope or that it was not their original and expressed intent to provide adequate and uniform illumination for the low-power objectives.

Reviewing the documentation it appears the contractor's claims with regard to the Low Magnification Lens are essentially invalid.

8. Film Loop. The last claim the contractor makes pertains to the film looping mechanism. Both reference (d) and (e) propose a "Loop Forming Mechanism (Identical to Model 387 Viewer). As a part of the film handling facility in this instrument a film loop can be formed between the adjacent viewing areas containing as much as 14 feet of film (center of right format to center of left format)." Both the [redacted] indicated that the instrument would be 60" long. The contract for the [redacted] took exception to this specification and stated that "the film loop to be provided in the unit is 16 feet in length. It is anticipated that the parties shall promptly negotiate to increase the size of the loop, probably to a 20-foot size." The [redacted] does not take exception to the proposed 14 foot film length in either the contract or its amendments but it must be the same as the [redacted] The delivered instruments have a maximum film loop length of 18 feet 2 inches.

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25X1A On 24 May 1963 the contractor proposed to increase the film loop length of the [redacted] to either 20 feet or 24 feet, maintaining the 60" cabinet length. The Progress Report of July and August 1963 stated that the "overall length will be 84 inches"; however, this report also stated that "up to 16 feet of film can be drawn into the loop forming slot." This indicates that the contractor was increasing the cabinet length without increasing the maximum film loop length. Discussions between the contractor and the technical monitor on 10 and 12 September 1963 indicated that the overall length of the instrument would have to be increased by two feet to 84" to add 4 feet to the film loop (maximum 18 feet).

25X1A [redacted] trip report (first conference, regarding [redacted] dated 12 September 1963 confirmed the above in that "a 25X1A beneficial result of the cabinet lengthening is the increase of the excess film loop from 16 feet to 20 feet without a design change of the present efficient mechanism now in use at NAVPIC /387 Viewer/. The cabinet will be lengthened by two feet to approximately 81"."

The monitor expressed exception on 26 October 1963 to the film loop now being listed as 16 feet vice 20.

In a discussion held between the contractor and the technical monitor on 19 November 1963, as documented in the Progress Report for November 1963 the agreement was reached as follows: "film loop takeup to have length of 19 feet as measured from center of format areas. Consideration will be made to speed up film loop threading velocity." The equipment configuration was not to be changed as a result of this agreement.

There is no record of further documented discussion concerning this subject.

A review of the above documentation and conversations between the various monitors and the contractor indicates the following:

25X1A A. The contractor proposed a 14 foot film loop in his proposal for the [redacted]

B. The contract for the [redacted] took exception to the proposal and changed the 14 feet to 16 feet. 25X1A

C. The contract for the [redacted] was keyed to the [redacted] and would automatically become 16 feet. 25X1A

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D. At the time of negotiation the contractor was asked to propose on a extra cost modification to change the film loop to 20 feet; his proposal was technically unacceptable and, as a consequence, rejected.

E. The contractor ran into technical problems which required them to increase the size (length) of the [redacted] and 25X1A
25X1A [redacted] by 2 feet. This increase in length was agreed to with the stipulation that they increase the film loop as much as possible without changing the basic mechanism.

There is no basis for this claim what-so-ever.

9. Due to the technical problems which beset these projects, the government has had to accept exceptionally late delivery. This has to some extent reduced the usefulness of the equipment. This factor should be considered in any negotiated settlement.

NOTE: * Underlining is ours.

25X1A [redacted]

Assistant for Plans and Development, NPIC

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